MODIS TECHNICAL TEAM MEETING

October 13, 1999

Vince Salomonson chaired the MODIS Technical Team Meeting. Present were Bill Barnes, Francesco Bordi, Barbara Conboy, Mark Doman, Wayne Esaias, Al Fleig, Bruce Guenther, Dorothy Hall, Chris Justice, Steve Kempler, Michael King, Ed Masuoka, Harry Montgomery, Bob Murphy, Skip Reber, and Mike Roberto, with Deborah Howard recording the minutes.

1.0 SCHEDULE OF EVENTS

EOS-PM SWAMP Meeting	October 15, 1999
MODIS PI Processing Meeting Building 33, Room H114	November 3, 1999 9:30 a.m.
MODIS Science Team Meeting The Sheraton Columbia Hotel Columbia, MD	November 16–17, 1999 8:30 a.m.
Terra Launch Vandenberg Air Force Base Lompoc, CA	No earlier than November 23, 1999
AGU 1999 Fall Meeting San Francisco, CA	December 13–17, 1999
IGARSS 2000 Abstracts Due	December 28, 1999
AGU 2000 Spring Meeting Washington, DC	May 30–June 3, 2000
IGARSS 2000 Honolulu, HI	July 24–28, 2000
EOS-PM Launch	December 21, 2000
Next Mini-SWAMP Meeting	Date TBD

2.0 MINUTES OF THE MEETING

2.1 Instrument Report

The group discussed four remaining instrument issues. These are analog-digital converter (ADC) bin size discrepancies, non-working detectors in Band 5 and Band 6, band-to-band registration (BBR), and Band 23 and 32 responsivity issues.

The ADC issue affects the PhotoConductive (PC) Bands 31 - 36. The group discussed potential scenarios. Guenther said that the best ADC performance is

operating all subsystems on the B side, or the fully redundant configuration. In the full redundant configuration we have one channel on each band where MODIS performs as a 10-bit instrument, and MODIS performs as a 12-bit instrument in the remaining channels. The weakest MODIS performance is when we operate all subsystems on the A side (also known as the primary side). In the all primary side, the PC bands operate mainly as a 9-bit instrument, in essentially all channels. Doman said that there are many ways to configure sides A and B together and that we would have to have multiple failures before relying completely on side A. Esaias asked whether the aging of any of these components changes them and Guenther replied that it does not seem that aging would change the general magnitude of the effects described.

Roberto said that another channel in Band 6, channel 4, is not working. Also, warming the focal planes brought some of the channels back online. Channels coming on and offline could indicate a delamination of the detector. Roberto said testing would continue about another 2 weeks. Channels affected in Band 6 include #1, 2, 4, 7, 8, and 19. Guenther asked how PFM was different and Roberto said that they are also looking at PFM for similar issues.

For the BBR issue, registration between focal planes seems to be stable. Regarding Band 23 and 32 changes in responsivity in the detectors, Roberto said there is about a 4% reduction in responsivity.

Fleig showed the group an image of how missing data from non-working detectors would effect data images. With non-working channels (as described above) we would be missing about 25% of the data from a prime scan in the continental United States. The bowtie effect might reduce the effect a bit. Fleig also showed a chart of a linear approximation of 1-day coverage relative to the number of detectors missing.

2.2 Terra Launch

King reported that the RL-10 engines did not clear the flight status review at KSC last Friday, October 8. Thus, Terra was not fueled earlier this week and would not launch in November. However, Terra may launch during the first 2 weeks in December. Esaias commented that there would be further tests on the analytical model for the RL-10 engines.

2.3 L1 Integration

Bordi reported on MODIS Level 1 Integration Summary Status (see Attachment 1). He said that Level 1A and geolocation (PGE01) and Level 1B (PGE02) are at the DAAC. The DAAC plans to promote cloud mask (PGE03), version 2.4.3, to ECS Drop 5A Ops by the end of October. Cloud mask has been delivered to the DAAC, however, it is awaiting NICE data. The L1A subsetter (PGE71) is waiting for an SDST patch rather than an ECS patch. The MOSS-3 testing will include PGE03, version 2.1.0, rather than version 2.4.3, the at-launch version. MOSS-3 will probably not include PGE71.

Many L1 integration issues are closed. Issue #1.2, regarding a "Subscription Delivery Notice: user string not being filled in impacts cal/val of sensor," seems

to be resolved, but will be tested in MOSS-3. Issues #2, 3, 6, 7, and 8 are closed (see Attachment 1). Issue #4, regarding DAAC support for PGE55 is in progress. Issue #5, regarding establishing policy and process to release L1 software to the public, remains open. For issue #9, SDST needs to provide a new production profile rather than a new production rule for L1A. Issue #11 is open. It is to develop a data policy for MODIS about deleting L1 data sets from the archive when new versions are used rather than keeping multiple copies.

2.4 GDAAC

Kempler reviewed GDAAC Notes for MODIS Technical Team Meeting dated 10/13/99 (see Attachment 2). The MOSS-3 dry run dominated the last week at the DAAC. PGE's 01, and 02, and an operational PGE03, are in Ops mode and ready for MOSS-3 testing. During the MOSS-3 dry run, the GDAAC ingested 100% data from EDOS and processed approximately 26 hours of 48 hours of data. This was partially due to competition for resources and the process of debugging the system. Kempler reiterated that this is within a cranky system.

Justice commented about former problems with the MOSS-2 testing where there were conflicts between production and distribution that were to be fixed by the time MOSS-3 tests began. He suggested fixing the problems identified in the MOSS-3 dry run before running MOSS-3. Masuoka said that although the ECS team is working onsite at the DAAC to patch and fix the system, there is not enough time fix it completely. He said that ECS is detailing their progress.

SDST is running Y-day around the MOSS-3 tests. No formal tests other than MOSS-3 are scheduled.

The group discussed mission critical versus mission essential conditions and operational readiness. One question that came up was whether to work on Day 1 data until it is done or to continue to Day 2 data on Day 2. Masuoka said that we are at better than 50% production now with some flaws in the system not yet fixed by ECS. Guenther asked about problems with processing and distributing data. The group agreed that a realistic, clear plan is needed. Justice suggested that Bordi do the same coordination for Level 2/3 that he has done for Level1 integration.

Regarding GDAAC staffing when the Center is closed for Y2K considerations over the New Year weekend, the MODIS team said it would be okay for the GDAAC to be unstaffed during that time.

2.5 SDST

Masuoka reviewed the Launch Ready PGE Status dated 10/13/99 (Attachment 3). He said that land surface temperature needs a patch from ECS and that a lot of Level 3 Land would be worked on next. There are some performance issues for 8-day products.

Masuoka asked about presentations for the EOS-PM SWAMP meeting this Friday. Salomonson and Murphy plan to present a MODIS instrument summary, cal/val summary, and software summary at the meeting.

2.6 Snow and Ice

Hall briefly revised her comments from last week on a new Alaskan data set that seems to show snow melting and new snowfall. She said that in a few instances some clouds are being mapped as snow.

2.7 MAST

The MODIS Science Team Meeting is scheduled for November 16–17, 1999 at the Sheraton Columbia Hotel in Columbia, MD. The meeting will be smaller this time and will be on an invitation-only basis. MAST sent out invitations today via e-mail.

Attendance at the Terra launch could be planned more informally when a launch date is set.

3.0 ACTION ITEMS

3.1 Action Items Carried Forward

1. Hohner, Fleig, and Masuoka: Include a space for MODIS early images on the MODIS home Web site. After launch, it would include downloadable early images on the MODIS site and a link to the DAAC's for obtaining products and data. The TRMM and SeaWiFS Web pages and how they process and present images can be used as good examples.

Status: This item remains open.

2. Legg: Find out when and how NASA MODIS representatives will be integrated into the NOAA review process and report on status to the MODIS Technical Team. NOAA has agreed to have MODIS representatives serve on the NESDIS data product review boards. However, MODIS representatives have not yet been invited to participate in an advisory panel.

Status: This item remains open. At the August 26 MODIS Technical Team meeting, Dan Tarpley said that NASA MODIS representatives would be included in an upcoming review board meeting.

3. Murphy and Conboy: Inputs for the EOS Data Products Handbook PM-1 Volume 2 were due to Barbara Conboy by June 17, 1999.

Status: This item remains open. In Murphy's absence, Conboy is working with Chris Justice and Wayne Esaias to get final reviews for the Land and Oceans sections. As of September 28, Conboy is only awaiting input from Oceans.

4. Hohner and Howard: Develop a weekly MODIS news page linked to the MODIS home Web site. It should include hot items and reflect weekly progress.

Status: This item is in progress.

5. Masuoka: Submit an EOS-PM Data Product Update to ESDIS.

Status: This action item remains open